56104576-55

AMENDMENTS

In the Claims:

Claim 1. (currently amended): A separating polyacrylamide gel capable of separating a sample into separate component parts utilizing a buffer system, comprising:

a non-stacking polyacrylamide gel; and

Tris(hydroxymethyl)aminomethane at the concentration range 0.15 to 0.25 M titrated with hydrochloric acid to a pH between 6.5 and 7.5.

A1

Claim 2. (original): The gel according to claim 1 comprising Tris(hydroxymethyl)aminomethane at 0.18 to 0.22 M and having a pH of 6.8 to 7.2.

Claim 3. (original): The gel according to claim 2 comprising Tris(hydroxymethyl)aminomethane at about 0.20 M and having a pH of about 7.0.

Claim 4. (original): The gel according to claim 1 having an acceptable shelf-life of at least 6 months after storage at about 4°C, wherein the acceptable shelf-life being determined by the gel producing a resolving protein separation migration pattern under electrophoresis conditions.

Claim 5. (original): The gel according to claim 4 having an acceptable shelf-life of at least 9 months.

Claim 6. (original): The gel according to claim 5 having an acceptable shelf-life of about 12 months.

Claim 7. (original): A method of preparing a polyacrylamide gel, the method comprising polymerizing acrylamide in the presence of a cross-linking agent, water, a buffer system for the polyacrylamide gel and a polymerisation means;

wherein the buffer system comprises Tris(hydroxymethyl)aminomethane at the concentration range 0.15 to 0.25 M titrated with hydrochloric acid to a pH between 6.5 and 7.5.

Claim 8. (original): The method according to claim 7 wherein the cross-linking agent is N,N'-methylene-bis-acrylamide, and the polymerisation means is selected from redox systems using ammonium persulfate and N,N,N',N'-tetramethylethylenediamine (TEMED), photoinitiation systems using riboflavin, or thermal initiation using; ammonium persulfate.

A1 contd

Claim 9. (original): The method according to claim 8 wherein the buffer system comprises Tris(hydroxymethyl)aminomethane at 0.18 to 0.22 M and having a pH of 6.8 to 7.2.

Claim 10. (original): The method according to claim 9 wherein the buffer system comprises Tris(hydroxymethyl)aminomethane at about 0.20 M and having a pH of about 7.0.

Claim 11. (original): The method according to claim 7 wherein the gel has an acceptable shelf-life of at least 6 months after storage at about 4°C, wherein the acceptable shelf-life being determined by the gel producing a resolving protein separation migration pattern under electrophoresis conditions.

Claim 12. (original): The method according to claim 11 wherein the gel has an acceptable shelf-life of at least 9 months.

Claim 13. (original): The method according to claim 12 wherein the gel has an acceptable shelf-life of about 12 months.

Claim 14. (currently amended): An apparatus for use in gel electrophoresis, ~~the apparatus~~ comprising ___a separating polyacrylamide gel capable of separating a sample into separate component parts composed of a non-stacking polyacrylamide gel; and

~~utilising~~ a buffer system comprising~~osed of~~ Tris(hydroxymethyl)aminomethane at the concentration range 0.15 to 0.25 M titrated with hydrochloric acid to a pH between 6.5 and 7.5.

Claim 15. (original): The apparatus according to claim 14 wherein the gel comprises Tris(hydroxymethyl)aminomethane at 0.18 to 0.22 M and having a pH of 6.8 to 7.2.

Claim 16. (original): The apparatus according to claim 15 wherein the gel comprises Tris(hydroxymethyl)aminomethane at about 0.20 M and having a pH of about 7.0.

Claim 17. (original): The apparatus according to claim 14 wherein the gel has an acceptable shelf-life of at least 6 months after storage at about 4°C, wherein the acceptable shelf-life being determined by the gel producing a resolving protein separation migration pattern under electrophoresis conditions.

Claim 18. (original): The apparatus according to claim 17 wherein the gel has an acceptable shelf-life of at least 9 months.

Claim 19. (original): The apparatus according to claim 18 wherein the gel has an acceptable shelf-life of about 12 months.

Claim 20. (currently amended): A method of performing electrophoresis, ~~the method~~ comprising:

(a) applying a sample containing one or more compounds to be separated to a gel of an electrophoresis apparatus according to claim 14;

(b) providing an electrode buffer; and

(c) subjecting the gel to an electric field for sufficient time such that at least one compound in the sample is caused to move into the gel.

A1 Cont'd

Claim 21. (currently amended) A method of performing electrophoresis, comprising:

~~The method according to claim 20 wherein electrode buffer comprises~~ (a) applying a sample containing one or more compounds to be separated to a gel of an electrophoresis apparatus whereby the apparatus contains a separating polyacrylamide gel composed of a non-stacking polyacrylamide gel and a buffer system composed of Tris(hydroxymethyl)aminomethane at the concentration range 0.15 to 0.25 M titrated with hydrochloric acid to a pH between 6.5 and 7.5.;

(b) providing an electrode buffer, whereby the electrode buffer is Tris(hydroxymethyl) aminomethane and 4-(2-hydroxyethyl)piperazine-lethanesulphonic acid (HEPES); and

(c) subjecting the gel to an electric field for sufficient time such that at least one compound in the sample is caused to move into the gel..

A1 Cont'd

56104576-55

Claim 22. (original): The method according to claim 21 wherein the electrode buffer has a concentration of 0.05 to 0.125 M and has a pH of 7.5 to 8.5.